THE INVENTION CLAIMED IS

1. Method for increasing and/or prolonging *in vivo* or *in vitro* activity of plant growth regulators (PGRs), comprising:

a) locally increasing the concentration of active plant growth regulators in a plant and/or plant part(s) by either or both of the following:

1) administering the PGR(s) in encapsulated form;

2) administering PGR(s) that have been chemically modified by linking it (them) to one or more carrier molecules, optionally with interposing of a spacer molecule;

b) increasing the sensitivity of the plant and/or plant part(s) to the activity of plant growth regulators by administration or application of one or more means which result in a defensive response in the plant.

2. The method of claim 1, wherein the chemical modification comprises addition of a protecting group selected from the group consisting of tertiary-butyloxycarbonyl, benzyloxycarbonyl, propionyl, and bovine serum albuminate.

3. A plant metabolism regulator comprising a compound selected from the group consisting of tertiary-butyloxycarbonyl aminooxyacetic acid, benzyloxycarbonyl aminooxyacetic acid, N,N' (diaminooxyacetic acid) ethylenediamine, N,N' (di-tert-butyloxycarbonylaminooxyacetic acid), propionic aminooxyacetic acid, 1-N-indole-3-hexanoic acid, indoleacetic acid-N-conjugate with bovine serum albuminate, indole butyric acid-N-conjugate with bovine serum albuminate, and indoleacetic acid-C-conjugate with bovine serum albuminate.

4. The plant metabolism regulator of claim 3, wherein the plant metabolism regulator inhibits plant ethylene activity.

5. The plant metabolism regulator of claim 3, wherein the plant metabolism regulator delays flower senescence.

6. The plant metabolism regulator of claim 3, wherein the plant metabolism regulator induces root formation.

7. A method for regulating plant metabolism, comprising the administration of a compound selected from the group consisting of tertiary-butyloxycarbonyl aminooxyacetic acid, benzyloxycarbonyl aminooxyacetic acid, N,N' (diaminooxyacetic acid) ethylenediamine, N,N' (di-tert-butyloxycarbonylaminooxyacetic acid), propionic aminooxyacetic acid, 1-N-indole-3-hexanoic acid, indoleacetic acid-N-conjugate with bovine serum albuminate, indole butyric acid-N-conjugate with bovine serum albuminate, and idnoleacetic acid-C-conjugate with bovine serum albuminate.

8. The method of claim 7, wherein the plant metabolism comprises plant ethylene activity.

9. The method of claim 7, wherein the plant metabolism comprises flower senescence.

10. The method of claim 7, wherein the plant metabolism comprises root formation.